MONTHLY WEATHER REVIEW.

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INTRODUCTION.

This REVIEW shows the general meteorological conditions which prevailed over the United States during the month of March, 1883, as indicated by the reports received from the regular and voluntary observers of the Signal Service, up to April 20th, 1883. A brief description is also given of the storms which occurred in the north Atlantic during the month, as based upon observations taken at 7 a. m., Washington time.

The special features of the month are:—

1st. The continuation of the floods which began in the lower Mississippi valley during February.

2d. The low mean temperature over the districts east of the Missouri and lower Mississippi rivers, averaging from 1°.3 in Florida to 6°.5 in the lower lake region below the mean of the month.

3d. The large deficiency in the rainfall over the country from the upper Mississippi valley to the Atlantic coast, and the excessive rainfalls which occurred in California during the latter part of the month, terminating the serious drought which prevailed in that state.

4th. Chart ii. shows the limits within which icebergs have been observed in the north Atlantic during the month. The southern limit is now on the forty-first parallel of latitude, and the eastern limit is shown near the forty-fifth meridian.

In the preparation of this REVIEW the following data received up to April 20th, have been used; viz.: the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and thirty-six Signal Service stations and fifteen Canadian stations, as telegraphed to this office; one hundred and eighty-eight monthly journals, and one hundred and seventy-eight monthly means from the former, and fifteen monthly means from the latter; two hundred and forty-five monthly registers from voluntary observers; fifty-eight monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports, through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs, furnished by the publishers of "The New York Maritime Register;" monthly weather-reports from the local weather services of Indiana, Kansas, Nebraska, and Tennessee, and of the Central Pacific railway company; trustworthy newspaper extracts; and special reports.

ATMOSPHERIC PRESSURE.

[*Expressed in inches and hundredths.*]

The distribution of mean atmospheric pressure for the month of March, 1883, determined from the tri-daily telegraphic observations of the Signal Service, is shown by the isobarometric lines in red on chart iii.

The mean pressure of the month is greatest over northern Montana and northwestern Dakota, where it is above 30.2. The isobar of 30.15 incloses a region between the ninety-fifth and one hundred and fifteenth meridians north of parallel forty. From the area of greatest pressure southwestward the monthly means diminish over central California to 30.01 at Visalia and 30.02 at Sacramento, but they increase at the coast stations to 30.05 at San Francisco and San Diego, and 30.08 at Los Angeles. Over the southern sections of the country the mean pressure is above 30.05, except at stations in the southern parts of Arizona, Texas, and Florida. The pressure is least over the Canadian Maritime Provinces, the lowest monthly mean, 29.78, being reported from Charlottetown, Prince Edward Island.

Compared with February, the mean pressure shows a general decrease at all stations varying from 0.02 to 0.32. The deficiencies are greatest in the northern plateau and on the Atlantic coast north of the fortieth parallel; they are least in Arizona, Nevada, and southern California. There is an average decrease of about 0.2 from the lake region and upper Mississippi valley to the south Atlantic and Gulf states.

DEPARTURES FROM THE NORMAL VALUES FOR THE MONTH.

The pressure is below the normal on the Pacific coast, over the northern part of the upper lake region, in New England, Florida, and along the south Atlantic and east Gulf coasts. In these districts the departures vary from 0.01 to 0.08, and are greatest on the Pacific coast. In the other districts the mean pressure is from normal to 0.14 above, the greatest departures occurring at stations in the extreme northwest and in the northern slope. From the middle Atlantic coast to the Missouri valley the departures are from normal to 0.08 above.

BAROMETRIC RANGES.

The monthly barometric ranges have been greatest in New England, the upper lake region and the extreme northwest; they have been least in New Mexico, Arizona, and southern California.

The following are the greatest monthly ranges reported: Eastport, Maine, 1.65; Newport, Rhode Island, 1.59; Block Island, Rhode Island, 1.58; Portland, Maine, 1.56; Duluth, Minnesota, 1.55; Provincetown, Massachusetts, 1.54; Saint Vincent, Minnesota, 1.53; New London, Connecticut, 1.48; Marquette, Michigan, 1.46; Escanaba, Michigan, 1.38; Mackinaw City, Michigan, and Delaware Breakwater, Delaware, 1.36; Moorhead, Minnesota, 1.35; New Haven, Connecticut, Barnegat City, New Jersey, and Huron Dakota, 1.34; Yankton, Dakota, 1.32; Albany, New York, 1.30. The smallest monthly ranges are: San Diego, California, 0.28; Los Angelos, California, 0.33; Tucson, Arizona, 0.36; Yuma, Arizona, 0.40; Fort Grant, Arizona, 0.41; Visalia, California, 0.44; Prescott, Arizona, 0.45; Silver City, New Mexico, 0.49; Camp Thomas and Fort Apache, Arizona, 0.52; El Paso, Texas, and Red Bluff, California, 0.56; Eagle Rock, Idaho, 0.59.

In the several districts the monthly ranges have varied as follows:

New England.—From 0.94 on the summit of Mount Washington, New Hampshire, to 1.65 at Eastport, Maine.

Middle Atlantic States.—From 1.00 at Lynchburg, Virginia, to 1.36 at Delaware Breakwater, Delaware.

South Atlantic States.—From 0.79 at Atlanta, Georgia, to 1.10 at Kittyhawk, North Carolina.

Florida peninsula.—From 0.55 at Key West, to 0.81 at Cedar Keys.

Eastern gulf.—From 0.81 at Starkville, Mississippi, to 0.91 at New Orleans, Louisiana.